



Design for Façade of The Horniman Museum. R. Anning Bell, des.

NOTES ON THE PRACTICE OF PICTORIAL MOSAIC.

By ROBERT ANNING BELL.

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MY subject, the art of pictorial mosaic from the practical point of view, imposes upon me the necessity of repeating to a considerable extent the remarks I made in this room in March last after hearing Mr. Harrison Townsend's admirable paper on the mosaic work of the past, so I must begin by asking those of you who were present then to bear with me if what I am going to say sounds somewhat familiar.

Mosaic is a method of artistic expression which has many advantages peculiar to itself, and which also has very definite limitations. These have not always been recognised by those who have worked in it, and I think that in most late work a courageous ignorance of its limitations has been accompanied by a lofty indifference to its beauties. The latter is a still more persistent characteristic than the former, for the limitations of an art persist in enforcing themselves, however artful the attempted evasion, whereas the peculiar beauties proper to the material may be easily avoided, and very dreary work can be done in quite a good method. It is obvious to anyone who has studied the work of the past that the realistic representation of natural effects, although it has been sometimes remarkably near success, is not the way to get the greatest beauty possible out of the material. And the proof is that the greatest applause ever gained in that direction is the remark that "one almost took it for an oil-painting." As in all crafts, the material itself, its qualities and limitations, is the first thing to study; then, always with a judiciously critical interest, as of one who wishes to see what has been done well, rather than simply what has been done, the work of the masters of the past. They were experimenters in their time, and sometimes their experiments were not happy. Their failures as well as their successes should teach a lesson.

The material itself, the coloured glass from which the tesserae are made, proclaims itself at the outset as being unsuitable for realistic effects. And this for two reasons. The first and strongest is the uniformity of its surface; the second, the fact that it has to be applied in separate pieces with an interval, however small, between them. The first, the sameness of the quality of the surface, whatever the variety of colour, renders it impossible to get that variety in the texture of the material which is the special reason why oil paint is so

triumphantly superior to any other material in the rendering of the look of Nature. The thick impasto, the thin glazes beside or over it, the infinite variety of roughnesses of surface, the quality of brush-work, of work with the palette-knife, of thin sloppy paint and thick glutinous paint: all these help and are necessary for the realisation of the texture of Nature, and all are beyond the powers of mosaic. I do not mean to say that no variety of texture at all is possible in mosaic, because there is a certain amount to be obtained in various ways which I shall touch upon later; but it is so slight in comparison to that of less rigid materials as very strictly to restrain the designer.

The second, the fact that a mosaic picture is composed of definite separate pieces of glass, and usually not varying greatly in size, is another objection; the tints cannot shade off into each other with quite the subtlety of paint, and the interstices between them form a lacework of ground colour and shadow which is the same all over the surface and adds to the monotony of the texture. The effect is similar to that of the underlying grey "gauze" in a half-tone block printed in colour. But whereas the "gauze" is unpleasant owing to its regularity, the parallel effect in mosaic is attractive because the tesserae vary somewhat in size. In the attempt to get the picture effect the workers have used smaller and smaller pieces in order to shade the tints imperceptibly, and they have really succeeded in making them imperceptible at a little distance. But this grey lacework of the interstices is always there, and is enough in itself to prove the attempt absurd, for, though unseen, it still has its quieting effect on the whole. It therefore seems that the material commands a certain flatness as the effect to be aimed at; and, I think, as a corollary to this, a certain archaism or stiffness in the design. The word archaism, though so often used to define the peculiarity I mean, is not quite fair in this connection. When it is obtained through a more flexible material, such as paint, then I think it is justified, as it implies a wilful suppression of many of the most characteristically beautiful qualities of the material. It is generally the result of an admiration, praiseworthy in itself, though fallacious as a guide, for those early masters whose limited knowledge of the medium did not allow them to use its full powers. They, I am sure, were the last men to be archaic if they had known how not to be; and they would have derided the man who with the powerful medium of oil paint tries to get the faded look of old tempera or fresco.

A third reason may be mentioned. It is that the lights are not so light or the darks so dark as in other mediums, and consequently the strength of effect must be proportionately diminished.

To return. When I say that the material commands a certain stiffness in the design, I mean that the very flatness of effect which its limitations impose seems to exercise some restraint on the style of the design. As you cannot get accidental effects and the fleeting *nuances* of Nature, so you should choose a manner of design which by its severity and simplicity has no occasion for them. You cannot design as Rubens and paint as Giotto. I feel, therefore, that this stiffness or rigidity is not truly archaic, but is the fullest expression which the limits of the material permit; and I feel also that within these limits it gives an artist plenty of elbow-room for his invention if he has any feeling for the method.

From all this it is evident that the subjects chosen for illustration in mosaic must be such as are suitable to a necessarily austere treatment. It is evident that the play of facial expression or momentary gesture is out of court, and that such subjects as depend on these are unsuited to our purpose. The characters introduced cannot be likenesses, or the occasion of their introduction a mere incident; the characters should be types, the incidents symbolic. Mosaic may be used to tell the story of the Creation, to portray the archangels or the goodly fellowship of the prophets, but it cannot be intimate or amusing.

It can be magnificent and splendid, but not humorous. Dick Whittington and his Cat or a company of genial toppers are beyond its powers.

I know, of course, that it has been often used for what may be called portraits, as in Ravenna and in San Paolo Fuori at Rome: but the figures of Justinian and Theodora are to be taken as symbols of Earthly Power and Authority, of Law and Justice, rather than as likenesses of a particular wedded pair. They are the Emperor and Empress standing before their Judge. The littleness of earthly glory is the message they bear. The row of popes in the latter is meant to impress the spectator with the imposing chain of the Vicars of Christ, the continuity and power of the Papacy, rather than to interest him in the features of individuals among them.

I have dwelt on this subject of the reasons for archaism or stiffness of the design because I wish to defend what I think the suitable treatment of mosaic from the charge of affectation which is sometimes brought against it and similarly limited methods of decoration, such, for instance, as stained glass. The audience I am now addressing is not, I know, likely to bring such an accusation; but other artists, used to the more fluent and expressive methods of the brush, are often unable to see why mosaic should, as they express it, "have stopped there," and when one of these is given the opportunity of using it, he determines that he will "push it further." The results of this we have all seen, and I think we need not dwell upon them further than to regret that the material is so durable.

We now come to the really practical questions of working and placing the mosaic. I suppose it to be universally agreed that it should be some way from the eye and somewhat higher up—a good deal higher up, I think. I also think that, like many other good things, when you want it you want a lot of it; it is best of all when entirely covering a large space and unbroken by architectural features or mouldings of other materials. This applies more particularly to gold mosaic, which, when covering walls and domes, running round the arches, flashing into a glistening flake of light as it turns the corner, and covering every inch of space above the capitals, as we see it in St. Mark's and in the Capella Palatina at Palermo, is much more satisfactory in effect than when used in juxtaposition with arch mouldings and pilasters, as in many places in Rome or in San Vitale in Ravenna. There is something about the rough surface made by the tesserae, and the unavoidable unevenness of the plane surfaces caused by the moving of the soft putty into which they are set, which, when the mosaic is dominant in area, makes the masonry look poor and mechanical, and when the masonry dominates makes the mosaic look coarse and untidy. I do not like small panels of mosaic at all, even where they are merely filled with conventional foliage, though that is better than the clumsy look of small figures close beside the smooth and exact forms of the mouldings which frame them. I admit that in very small quantities it may look well; but then it is merely as a set-off to other things, a line of gold to emphasise the leaves in a capital or some such use, and it is merely a minor accessory, not a prominent element in the scheme of decoration. There are some modern experiments in the way of external friezes in mosaic in London; these, when well done, make me wish for more or none at all. I cannot feel that it plays a good second fiddle; it should lead the orchestra.

In interior work, gold mosaic, by which I mean a mosaic treatment in which gold is largely employed, seems to be superior in effect where the lighting is suitable to a treatment in colours only. Blue, perhaps, approaches it most nearly as a satisfactory ground colour, as in the tomb of Galla Placidia, but I do not think it equals it. I have not seen much of the latter, but when I have seen it this has certainly been my feeling, and I think it stands to reason that it should be so. The gold mosaic treatment should be very sparingly lit, and the windows should be as low down as possible. It is not nearly so effective on flat walls

as on curved surfaces. The domes and spandrels of St. Mark's and the Capella Palatina hold spaces of changing light and glorious mysteries of shadow which are wanting in the somewhat cheerless effect of churches where it is placed on flat walls only, as in St. Apollinare Nuovo and other churches of similar character—even in Monreale; and the merit of the mosaics themselves does not affect this. The apse is the ideal position for it. Here the illumination is all from below, and the glimmering shifting light and shadows which are its special glory are brought out to the utmost.

For external work—and it is only with external work that I have had actual practice—I am inclined to think that the use of gold is a mistake, and particularly so in this country. First, from the practical side, owing to the construction of the tesserae, it is likely to be damaged by frost, as the film of glass which covers the gold-leaf is very easily flaked off should any water get into the interstices, as it is sure to do; and, secondly, from the æsthetic side, there is no mystery of shadow to bring out its peculiar beauties; it glitters so strongly in sunshine as to destroy the effect of the design of which it forms part, and it is inclined to look rather garish even in ordinary daylight. In external work a light scheme of colour seems preferable to a deep one. The darker colours have a way of going together and telling as darks rather than as colours in a manner peculiar to mosaic. A sort of grittiness of surface, too, shows more unpleasantly in them than in lighter tints, and also any dirt which may settle on the tesserae will destroy the darker colouring altogether and make the whole thing look tawdry and squalid. The cooler colours seem pleasanter than the warm ones when used in any quantity. Much orange is peculiarly unpleasant, and even reds should be sparingly employed, and rather as accents to strengthen other colours than in masses for their own sakes. The reason of this is probably because the tesserae themselves, whatever colour they may be, have a glassy surface, and hence will reflect a cool light out of doors; and, as they are varied in plane, the reflections are bound to affect their colour when in a mass wherever you may stand. Consequently, you never get so rich an effect from your warm colours as would be expected from the absolute tint of the glass; there is as the result a want of quality about them in comparison with greens, blues, and so on. I may say that pink looks very well; but then naturally these cool reflections do not modify it so much. I remember I wanted to get quite a flower-pot red colour in some architectural details in the background of the mosaic I was carrying out last year, and, though when close to the colour looked just as I wanted it, it would not carry. It was only afterwards that I thought of this reason, which I now believe explains it. No doubt in time the surface of the glass will be somewhat dimmed and the reflection will not have so much effect; but then doubtless what will dim the reflections will also dim the original colours, so that it is of no use to trust to time to bring the desired result. Blues and greens tell well at a distance; they have a charming quality, will keep their colour very fairly, though you need to use a much stronger blue than might be expected if it is to be at all rich in effect. In fact, it may, I think, be taken as a general rule that differences of any light tints carry much further and tell much more strongly at a distance than similar differences in a lower key. In whites a very slight difference will have a very marked effect, and it will tell less close to the eye than some way off, whereas quite the opposite is true of strong colours, particularly of red. Difference of quality in the glass has also a marked effect on its carrying power, and the varieties of the glass are very great—some almost transparent, and consequently holding a shadow from the piece above; some as opaque as a stone, and there are all sorts of stages between. With some the colour is a flat even tint all through; others are streaky or spotty. All these characteristics affect their carrying power. They break, too, with a different surface according to their texture, and, as you know, it is generally the edge which is exposed in the

work, so this also has its influence. I do not think that anything but practice can help one in this matter, and even that does not seem to help much; it is a new experiment each time. I can assure you that it is very annoying to have to cut away a face which seems quite satisfactory on the scaffold, because it has developed a large boil or other infirmity when seen from across the road. This is a frequent experience, and proves that one should have frequent opportunities of seeing the work from a proper distance.

The size of the tesserae is another subject for consideration. I do not think that very great differences of size are advisable in figure work. Certainly to have a few large pieces among a large number of small ones is unsatisfactory; they look like tiles and out of keeping with the rest—in fact, they are tiles, as large pieces cannot be the edge, but must be from the surface of the rondels in which the glass is cast, and consequently they have a different quality; the shine, too, which they throw off at some angles is most devastating in its effect on surrounding colour. The converse does not necessarily hold good, as I believe that, if you use mainly large pieces, a few small ones introduced here and there will rather enhance the effect. There is an interesting example of this in Mr. Beresford Pite's mosaic outside Pagan's Restaurant which has been carried out by Mr. Bridge and his assistants, who also executed my own at the Horniman Museum. Here the pieces are mostly quite large—six inches or more across in places, I should think. The smaller tesserae are used in lines bordering the foliage and for such-like offices. They take their places properly and largely help the result. But the essence of it all is that the large pieces very greatly predominate in the area covered. The interstices between the pieces are scarcely visible; at any rate, they take nothing like the share in the general result which they would have were the usual small tesserae employed, and the effect is naturally quite unlike what we are used to in mosaic. I should like to see more work done in this method: it has many advantages in a town like London; dirt cannot easily settle on it, and when it does is easily washed off; it is permanent, and, as the pieces are so large, it does not, I should think, demand so much labour as ordinary mosaic. This treatment, however, particularly demands large spaces. I should imagine that it would look very poor in small patches.

In old work the tesserae are never very large, as far as I have observed. I do not recollect being within measuring distance of one which was an inch across, though I think I have seen them as big some height up—generally used as spots in a pattern on drapery or on architectural features. I found myself that for outside work a scale larger than one generally sees in old work may be used with quite a good effect. I take it that the smaller pieces naturally help the effect of mystery which is wanted in interior work; but, as this is out of the question outside, and the smaller pieces mean much more trouble in cutting and insertion without corresponding gain, it is better on the whole to employ larger ones. The scale of the design—the height of figures, for instance—would to some extent determine this. Naturally, one would use small pieces on small figures, whatever might be the case with larger ones. Another point is that, should you use varying sizes of tesserae generally over the work, any place where they are kept of uniform size will infallibly attract the attention by its regularity; this was done in a pilaster forming part of the background of the panel at the Horniman Museum, and that particular spot always catches my eye.

The size of the interstices between the tesserae is another feature of the execution which demands careful study. This is a direction in which we can usefully experiment, as the old mosaic workers seem to have paid it very little attention. Indeed, I cannot call to mind a case in which they seem to have deliberately used it to modify the effect; and I have no reason to believe that they tried it and found it useless—a sort of experiment which one can sometimes see in other arts, where recent so-called developments, often accompanied by much

outery, are simply repetitions of trials which the early men made, and, finding them unproductive, quietly dropped. A considerable variety of texture may be obtained in this manner. In background work, for instance, the interstices can be quite large if the colour is not wanted to be very pure, for of course the dull tint of the putty tones down or saddens brighter colouring. In such parts as faces, hands, or other details to which particular attention should be attracted, they may be quite close together, so making a comparatively solid mass of colour, and giving emphasis to the part. Indeed, in actual practice it would be difficult to work a face without keeping the tesserae close, as the tone of the interspaces would destroy the quiet modelling, which is all that is necessary or advisable.

The mention of modelling brings me to the subject of light and shade. From what I have already said as to the limitations of the material, it follows that I do not believe in attempting anything like truth of relative values or strength in the general effect of light and shade. Simplicity in the modelling is to be desired. Variety of tone, as much as is necessary, may be obtained by the relative strength of the colours used in different parts of the design. Anything approaching realism of texture in the draperies or other accessories should be avoided; it should be always felt that the trees, buildings, clouds, textiles, and so on, are rather symbols of these things than in any close way representations of them. Any attempt at truthful representation of them only proves its own futility. Of this, unfortunately, there are innumerable examples in the mosaics of the last four hundred years, and much modern work, especially abroad, is following in the same direction. With the rise and development of painting came an increased interest in the study of Nature, and an increased reverence for it. As the mediæval ascetic doctrines of the uncleanness of the flesh and the vanity of the things of this world—and consequently of the representation of them—gave way to the more civilised attitude of modern times, so artists became more interested in reproducing the actual look of Nature, and they became restive under the restraints which the more limited materials imposed upon them. This was particularly the case with the designers in mosaic. Some of the greatest artists the world has ever seen were among the greatest sinners in this respect. The immense authority of Raphael, of Titian, of Tintoret added a fatal impetus to the general movement of lesser men, and assured the degradation of this noble art. It is only in our own time that a real consciousness of the great law that the material dominates the treatment has led us to regard the study of that as the first essential, and to value the work of the past, and see the beauty in it rather as it expresses what is properly within its scope, than when, by some clever trickery, it approaches effects which can only be satisfactorily presented by another medium.

I will now turn to the actual work of putting the mosaic upon the wall. A colour design is first made, and from this full-size cartoons are drawn out as they are wanted. These, in my own practice, I have made in pastel and in watercolour. I found the latter, on the whole, to be the best material, in spite of the advantage of being able always to repeat an exact tint, which is so useful with pastel, as the rough treatment to which they have to be subjected on the scaffold rubs off and defaces the pastels too quickly if they are at all large. The wall is well soaked with boiled oil, and the cement or putty, as it is generally called, is after a day or two applied to it about half or three-quarters of an inch thick. For this putty—there are many recipes; every mosaic worker has his own—you need a substance which will dry perfectly hard without cracking, will not scale off the wall, and will hold the tesserae firmly; you can make it any colour you wish by mixing pigment with it. I myself do not think much is gained by this in exterior work, as it soon gets a good average dirt colour whatever it may commence by being. In interior work it may be useful; that used in St. Paul's is of a red colour, I think.

Mr. Harrison Townsend, in his Cantor Lectures on the subject of Mosaic, gives an interesting account of the composition of cements. The early formula, which he quotes from Ciampini, refers to the lime cement of the Romans—a simple admixture of slaked lime with Tiburtine marble dust in the proportion of one to three. Occasionally a little linseed oil was used. A formula adopted by the post-Renaissance workers was, he tells us, composed of powdered Travertine, 60; slaked lime, 25; raw linseed oil, 10; boiled oil, 6.

When the putty is spread upon the wall a tracing from the cartoon is carefully pricked upon it. I may say here that you only put on as much at a time as you can cover with tesserae before it dries; the amount depends on whether you have made the putty quick or slow-drying, for you can vary it to some extent. Having pricked the outlines upon the putty the worker then, with the cartoon beside him, his tray of tesserae of the right sizes and colours, and his clippers to cut them with for small variations, begins to stick them into the putty one by one. I am speaking only of mosaic-work done *in situ* from the front, as I cannot think that a good result can possibly be obtained by other methods. The usual way of the modern Italians and some English is, I understand, to lay a tracing of the cartoon down flat in the workshop, to match the colours in the cartoon with the tesserae, placing them on it over the tint they are expected to match, and when the whole is covered, or so much of it as is convenient, the exposed surface of the backs of the tesserae is covered with cement, which is again covered with squares of slate or other suitable material. When the whole mass is set, these squares are taken up and sent off to be put up in position. The objections to this method are obvious. You cannot see the progress of the work, and it is impossible to make alterations as you go on, should any piece be unsatisfactory. The surface is too flat, as all the tesserae, being laid face downwards, are on one plane, and, finally, the joints between the square blocks in which it is fixed up often show distressingly. Anyone who has seen the recent restoration of the once lovely apse in the Lateran Church will know how horrible this effect can be. Here the separate blocks of mosaic, being flat in themselves, and being placed on a curved form, are still more in evidence than they would be on a flat wall. To return to the surface method which I employed, there are difficulties to be overcome owing to the weight of the mass of tesserae dragging in the pliant putty; they may sag down an inch or more in a couple of feet should the putty be slow and the weather warm, and you then have to hack it out and do the piece over again. Then the putty which is displaced by the tesserae being pushed into it gets bulged out here and there; this is often very annoying when it comes in a face or other important place, as it will give a false impression of modelling, likely to be very disastrous.

In translating the watercolour or pastel tints of the cartoons into coloured glass, a good deal of variety is possible, so that I feel it is necessary to be always in touch with the workers who are actually inserting the pieces, to discuss with them which tint and quality of glass shall be used, and sometimes to vary from the cartoon when the work already finished may suggest it. There is, of course, a great difference in the work done by different workers; the translation of a given piece of work in the cartoon by half a dozen executants would vary considerably, and the artistic quality of the result would vary as their own. For the setting of the mosaic is an essentially artistic craft; it is quite absurd of the designer-in-chief to say simply: "Here is my cartoon; take it and copy it exactly." It is impossible to copy it anything like exactly, and consequently complete co-operation between designer and craftsman or craftswoman—for it is one of the things that women do admirably—is absolutely necessary. If you are doing the cartoons, as is most probable, bit by bit as they are wanted, there are sure to be practical points to be settled. You may want to repeat a colour already existing in an executed part; you can no more copy in paint or pastel the exact shade of the glass than

the worker can copy in glass the exact shade of your material, and so you must settle it on the scaffold. The quality of the glass, as I have already said, varies very much. The choice of this has to be settled frequently; and then the width of the interstices and the size of the tesserae also call for discussion. So that if you do not keep in constant communication with the workers you are not likely to get the result you want, and you may get a rather lifeless one.

To conclude, mosaic is, to my mind, the most splendid, as it is the most permanent form of wall or ceiling adornment. But it is extremely arbitrary, and any attempt to stretch its limits is terribly punished. It will not easily put up with rivalry, and will not endure other methods of decoration in immediate juxtaposition. In interior work it quarrels with stained glass, and it destroys gilding, as may be seen in many a Roman church where the choir-arch and columns are gilt around an apse of mosaic. Outside, the mosaic must be made the dominant in the scheme of which it forms part. No colour can stand near it but in humble subordination, and its surface texture requires considerable art and discretion in the choice of neighbouring materials. Nobly used, it nobly repays; ignobly used, it can do nothing but disgust.

DISCUSSION OF MR. ANNING BELL'S PAPER.

The President, Mr. WILLIAM EMERSON, in the Chair.

MR. GEORGE FRAMPTON, A.R.A. [*H.A.*], in proposing a vote of thanks to Mr. Bell for his Paper, said that the author, like Mr. Crane, Mr. Spence, and other workers in this very beautiful art, were doing a great service to the art of this country and to architecture, and that lovers of art should be grateful to these gentlemen for devoting their attention to the placing of mosaic and other decorations on the same level as the fine arts. He knew personally a good many of the workers in this material on the Continent, and he thought that without flattering them and without flattering those in this country, we had in about half a dozen men, including Sir William Richmond, the finest workers in mosaic in the world. Titian and other great artists did mosaic, but they utterly failed, because they had no knowledge of architecture. A man could not be a decorator unless he had been through a course of architecture or had some love or appreciation for that art, for architecture should govern all the arts. He could not, of course, defend the character of some of the external mosaic work to be seen in London, but the more colour they could get outside their buildings, especially in London, the better. At the same time he did not think that colour should be the first thing. He had been much struck with the ornamental treatment of colour in the Grand Palais and the Petit Palais in Paris. It struck him as being a rather nice idea. A frieze was put up under a great colonnade with columns in front, and in the effect of that row of columns the colour was very fine; it was very delicate in scheme and it harmonised with the stones. He agreed with Mr. Bell that strong black shadows should be avoided, as they seemed to give the effect of a series of holes in the wall. A good example of

that was to be seen in the Panthéon at Paris, where some of the French artists had tried to be decorators and utterly failed. The only man who succeeded there was Puvion de Chavannes, who had taken the surface of his picture as part of the building. That picture of his really supported the building; it was on the surface of the wall. The others gave the effect of there being so many holes in the wall. One saw right through them in perspective. He would advise students to study this work on the Panthéon, for it would teach them more than anything the meaning of decoration, which so few people understood. What was wanted in decoration was the mind of the man—his own individuality, and his appreciation of the surroundings of his work, which Mr. Bell always gave. Another thing he would like to impress upon architects—because he had been through it himself—was that a successful decoration could never be got from a firm. When they took their work to a person whose one idea was to get a certain profit, he gave it to a workman, who as a rule, had very little or no feeling for art; and so it passed from one to another, and the result was that they got a very bad thing which spoiled their building. It was with very much pleasure that he proposed a vote of thanks to Mr. Anning Bell, who had always had the right kind of feeling for decorative work. He was one of the few men who understood what was required to make a beautiful surface without making a hole in the wall.

MR. WALTER CRANE, in seconding the vote of thanks, said it was difficult to add anything to so complete, practical, and artistic a paper, in which Mr. Bell had gone so thoroughly into the subject from the worker's point of view. It was a very great advantage that they should have an

artist who was willing not only to do the work in his own way, but to discourse upon it, and who had the power of expounding so clearly his principles and methods of work. He found himself so much in agreement with Mr. Bell's principles, not only as to the place of mosaic, but as to the true character and dignity of the art and its limitations, that there were very few points on which he should differ from him. There was one minor point on which he made an ingenious comparison between the network formed by the cement lines in tesserae and the textile lines which occurred in a half-tone process block; but whereas the former was an agreeable condition, the latter was a disagreeable one. The network of a mosaic was a pleasing thing; one really delighted in it as an essential part of the work; it was in the nature of a builded wall and strictly a surface construction; and few things were more satisfactory than the simple joints of well-laid brickwork. In an irregular fashion one got that, too, in a mosaic, and it was a pleasing thing in itself. Mr. Bell made some suggestive remarks about a possible extended use of those joints, making them more open or narrower; and probably one might regard the putty or the joints, which were an essential part of the work, very much in the same way as one would regard the half-tone of the ground in painting; for instance, in working in gouache on brown paper, one frequently left the paper in large interstices to speak for itself; it fell into the general scheme and helped the effect; so in mosaic, one might fairly regard the more or less brownish interstices as a kind of half-tone on which to impose colour. As regards the use of gold externally, most of them must have felt what Mr. Bell expressed—that there was a certain glitter, a garishness, in it as used externally. That, he fancied, would largely disappear perhaps if it were not applied to a perfectly flat surface; but he was inclined to think that in no case did gold look well on a perfectly flat surface. A curved or concave surface was generally much finer, owing to the variation and gradation which the shadows gave; also gold told well in half light when the design upon it was thrown into bold silhouette. Mr. Bell had spoken of the impossibility of reproducing a cartoon. He (the speaker), however, had made designs for mosaic long before the present method of working *in situ* upon the surface was revived with so much success. He remembered making some designs at the instance of Professor Aitchison for the Arab Hall in Lord Leighton's house, and those were executed, he believed, by the Murano Company. It was then necessary for the designer to make an exact cartoon, tessellating the whole of it, and marking all the joints in black, and he was very much astonished at the facility with which those designs were reproduced after the method Mr. Bell had described—viz. by laying down the work and filling in the putty and cement bed from the back.

The tesserae were given with the utmost exactitude, and the matching of the colours, allowing for difference in translation of the dead colour of the cartoon into the brilliant colours of the glass mosaic, was simply extraordinary; and even when designs were worked on this method he believed they had some method of giving a little push to the tesserae, in parts, to get more variation of facet in the gold of the background. One should "give the devil his due," and it was only fair to say that those panels would bear examination as good workmanship so far as exactitude and precision in the reproduction of the cartoons went.

Mr. C. HARRISON TOWNSEND [F.] said he rose at the President's invitation to support the vote of thanks to Mr. Bell for his very interesting and very lucid lecture, and he did it with the more pleasure remembering, as he did, a year or two ago spending a very happy five or six weeks in Rome with Mr. Bell in collecting material which had, he thought, helped him to formulate the views put before them in his Paper. With Mr. Bell's introductory remarks on the principles of mosaic no one could help agreeing. Particularly did he feel the strength of Mr. Bell's argument on behalf of what he pleaded for under the somewhat unhappy name of "archaism." A certain formal, a certain conventional feeling which was given to the treatment of the figure, and the expression of the elements of Nature in mosaic work, unhappily was apt to be classed, by those who did not understand the conventions and limitations of the material, as an attempt, and a wilful attempt, to imitate the method of work of those who had preceded them. Mr. Bell had made it clear that that stiffness and conventionality did not proceed from an attempt to imitate. As in architecture, so in every kind of decorative design, the attempt to be otherwise than as we are, and as our conditions allow us to be, was doomed to failure; but for a man frankly to allow himself to be influenced by his material, and to shape his design according to the limitations of this material, was to show himself an artist who recognised the medium in which he worked. To work in mosaic necessarily implied certain limitations which one had to recognise and accept, and within which to do one's best. Those limitations robbed the artist of many of his proudest attributes. The artist in mosaic was deprived of his hope of appealing for effect to *nuances* of atmospheric change; the glory of the sunset and the romance of the moonlight were nothing to him; his atmosphere was another atmosphere than ours. His faces were symbols—not expressions nor imitations of sentiments. His trees did not represent the trees of Nature, with the glittering of the sun or the tender light of the moon; they again were symbols, emblems of trees. But the artist in mosaic had some compensation for sacrificing his artistic attributes—he was able to work in the one im-

perishable material that a picture could be painted on, the one material that could resist all but fire; it could stand water, it could stand London fog, it could stand all the vicissitudes of climate and be uninfluenced in colour; it could hand down, as the Ravenna mosaics and as the Sicilian mosaics did, to men, 1,000 years after the artist had perished, his colour scheme as he left it, undiminished in brilliancy, as might be his picture in oil, unfaded or unrotted by damp, as might be his fresco. That was a great privilege, and one worth sacrificing some of the other sides of one's nature in order to attain. As regards Mr. Bell's interesting reference to the technique of mosaic, he had touched upon the cements at some length; but there was one interesting fact—viz. that the decadence of mosaic work, curiously enough, coincided with the attainment of the one perfect cement. Up to the early years of the sixteenth century mosaic workers contented themselves with working in lime cement; Muziano di Brescia in 1528 was the first to work in oil cement. That meant that he and those who followed him attained the power of working in a material which allowed them to obtain, with deliberation, effects which were impossible when they were working in a quickly-setting cement—using cement in the architectural sense—a lime-cement. The oil-cement, of course, opened up another field to the mosaic workers. It allowed them deliberation and the power of altering. Instead of having to do their work quickly and in a go-as-you-like kind of way to get it done while the lime was plastic enough to work, the oil cement gave them the opportunity of attempting things they had hitherto not dreamed of. This was undoubtedly one of the factors that led in the Renaissance and post-Renaissance times to the decay of mosaic design. It allowed them to think, and to delay, and to try for more ambitious ends than they had ever attempted before. He hoped that some among those present would tell them something of interest on the subject of cements. A design might be good; glass material was virtually everlasting; but what good was the most able design, and what value the most perfect material, if it was set in a composition that would not endure? He hoped to hear from Mr. Bridge and Mr. Spence something of value as to the way in which to render a design of merit permanent when executed in material of lasting value.

Mr. T. R. SPENCE said he thought the technical part of mosaic work might well be left to the man who had to carry out the work. That was a matter they need not worry much about. Now that there was a general and growing interest in the use of mosaic for decoration, its treatment should be approached in a practical and common-sense manner. In all schemes of decoration the great battle lay in the design, its suitability and its application to the right spaces, so that, as in all decorative art, no man should

embark in its practice unless he possessed the rare gift of design. Great discrimination should be exercised in the selection of the surfaces to be covered with mosaic. In every case such selections should be of spaces which at all times would have shed upon them the toning and uniting qualities of light and shadow. All interiors possessed these conditions more or less. External, flat, shadowless spaces were not quite satisfactory in this respect. They were always in one of two conditions—either in bright light or else in unflecked shadow. Granted that these panels or friezes might be good schemes of colour, yet they were shorn of the added charm of permanent variety and mystery. In the actual material the more brilliant and solid the colour the better. He used to be delighted to get the slabs of material which had delicate gradations of colour in each piece, but when they were cut up and fixed all these gradations were lost. If you are right in the first place with the surface to be covered—being under a fixed condition of varying light and shadow—this light and shadow will give naturally the subtlety and mystery without destroying the effulgence of the colour scheme. Deep, almost crude tones become rich and mellow, not impoverished. His meaning might be made clearer by mentioning Titian's wonderful blue drapery, the shadows of which were a deep red. One should be liberal in one's areas of colour, and not fritter them away by intersecting forms of ornament that in themselves are small in design. Drapery forms, fine in the designs of their lines and folds, are sufficient for the particular spaces they cover. Great spaces of blue or other colours in such forms as a dome, let its tincture be ever so crude, become harmonious from the natural shadows of its shape and the soft reflections of surrounding objects. The shadows and reflections are a broad and sweeping tone of softening unity. No mosaic, he thought, should be nearer the eye than ten feet. Its function was to express the sentiment of colour, and not to usurp such attributes as needed all the delicate and far-reaching craftsmanship capable of application to marble, metals, wood, etc. Some advocated that in the application of mosaic internally all mouldings and architectural features in any other materials should have no place. The vision of its success, however, had no place in his dreams. To him the juxtaposition of many and varied materials was inseparable from a really triumphant scheme of decoration. Jewels owed a large debt of gratitude to their setting. Figured subjects should be used where they suffered no distortion of their form. The treatment of figures on a dome, unless they were in perfect outline, was not, to his mind, satisfactory. Some asserted that figures should be drawn in simple lines without modelling. His experience led him to think that they should be modelled to a considerable extent, for when the

mosaic was carried out its crudity came very far short of the modelling on the cartoon, yet it added a quality of colour much more interesting than flat spaces filled in between hard black outlines. He need hardly say that the design should be in unity with the architecture. It should not belittle its details, but rather add to the expression of its parts. His idea was that no decorator, in the treatment of a large figure-subject, could afford to drop certain simple architectural forms in the actual picture which were of the highest importance as details to bind together its composition. He did not mean that details of the enclosing architecture should be reproduced or carried into the picture, but only such simple details as would give it those rigid and geometrical lines which unite and save it from chaos. In mosaic they possessed a brilliant and permanent material for decoration, but, as in the making of a fine piece of architecture or any other work of art, they must come down to the bed-rock of creation—conception, design, call it what one will; the all-important need is the man who can capture the beautiful, and has the practical sense to apply it rightly.

Mr. GEORGE BRIDGE said that he thought Mr. Bell had made a slight mistake as to the thickness of the putty when put upon the wall. Many architects thought that two or three inches were required for the whole mosaic, whereas the whole mosaic from the wall only took up an inch—an inch was ample—and the putty put upon the wall need only be half an inch thick; so that when the tesserae were pushed in about a quarter of an inch of putty was left behind. As regards the composition of the putty, the putty that he had used was lime and boiled oil. The great thing was to see that the lime was old—a year or two old, sometimes three years old.

Mr. WILLIAM BRINDLEY, F.G.S., said that much had been said by Mr. Bell and others as to the durability of enamel mosaic. There could be no difference of opinion about this, but as to the cement composition for fixing the tesserae, it was doubtful if the modern oil putty cements were preferable to the old Byzantine lime mortar ones, either of fine sand and lime, or marble dust and lime. Much of the latter, he believed, was produced from white marble, being only three-quarters burnt, the unburnt portion having become disintegrated into single grains, so readily crushed up. This process was still continued in Greece, as he himself had seen at Patras a mule going round turning rollers and fine-crushing the burnt marble. Slacked run putty lime was often prepared in the East years before it was used, and he thought albumen obtained from bullocks' blood was often added to it, and calcined sulphate of lime in some cases was mixed with it; the albumen then would produce slow setting. The marmoratum with which the fluted Greek columns of rough stone in Sicily at Girgenti and Pompeii

were coated about the thickness of a penny was, in his opinion, old lime putty, produced as above, and mixed with albumen and rubbed up to a glimmer polish, probably with bleached bees'-wax and fresh soft resin and oil. This might account in some way for its durability. Each mosaic-worker now had his own recipe, and only time would prove if the modern method was better than the ancient. It seemed to him that if they went in for new cement, which was a chemical business more or less, they would do well to consult such able chemists as Professor Church. He thought the Byzantine method of application was the ordinary one, as used now for rough work, by sticking the tesserae on a cartoon and transferring it on to the cement. This, he believed, was proved by the concave surfaces having closer joints than the convex ones, which would be the result if fixed in sheets. He also thought that the cost of production of a large dome surface by fixing of single tesserae would be almost prohibitory, and he did not see the gain for work indifferently lighted at a great height. The domes of St. Mark's had the effect of huge inverted polished brass cauldrons, enamelled with coloured figures. The surface was not disturbed; it had a solid architectural metallic look, and the tesserae were of an average medium size. He dreaded to think what would happen to some of the recent mosaic in long years to come, where almost small tile sizes were used. Surely the key to these big pieces must be weaker than when smaller tesserae were used.

Mr. WM. WOODWARD [A.] said there was one particular in regard to the embedding of the tesserae in the cement upon which he thought Mr. Bell might have descanted a little more fully. There were two methods as he understood. One, to embed the tesserae so as to produce a flat surface, and the other to embed them at an angle so as to produce a series of facets. Examples of both methods could be seen at St. Paul's Cathedral. In the cupola of St. Paul's was some mosaic work laid many years ago by Salviati; this was laid so as to produce a dull flat surface. To his mind, the money expended upon that particular form of mosaic had been to a large extent wasted; a similar effect could have been obtained at considerably less cost. Turning from this to some of the mosaic work done by Sir William Richmond, where the tesserae, in order to produce certain effects, had been produced angle-wise, the vast difference between the two methods struck the eye at once. The one, Salviati's, was absolutely dead and lifeless; while the other was perfectly brilliant and reflected in its various facets those grand tints, varying as the light struck the different facets, which to his mind were essentially beautiful. This was an effect which he thought Mr. Bell might admit we should to some extent strive to produce.

Mr. E. W. HUDSON [A.], referring to Mr. Bell's disapproval of any attempt after portraiture in

mosaic work, said that at the Brighton Museum there was a portrait of King George IV. upon some six feet of surface produced by he did not know how many thousand pieces of small tesserae—the idea being evidently to represent an oil painting at a distance. To his mind, any greater misapplication of ingenuity, perseverance, and money could scarcely be conceived.

Mr. THOMAS BLASHILL [F.] said he should like to ask a question about what he might call a modified form of mosaic, if, indeed, it could be recognised as a form of mosaic at all. All would agree that the cost of mosaic would prevent its being very largely employed, and that in itself was a pity, because out of a large amount of work excellence was more likely to be obtained than through the limitation of practice likely to result from the extreme cost. The particular example he wished to refer to was in France, at the Château of Chenonceaux. On the left of the entrance to that building there was a formal garden, and the wall which separated the garden from the river had a parapet something like three or four feet high, the inner side of which was plaster, and in the plaster was set an arabesque pattern of pieces of stone of different colours, he believed. That, of course, did not compete with whole mosaic, such as they were discussing; but it appeared to him to have an interesting appearance and effect. He was sorry to say it had not stood very well, and he was afraid in this country it would wear still worse than in France; but it seemed worth noticing, and perhaps, if a better kind of plaster could be invented, and a good deal of work could be done, something might be brought out as an alternative form of decoration to large surfaces. He should be glad to know whether anyone could tell them anything that might be useful for or against the particular kind of work which he had spoken of as existing at Chenonceaux. In his own practice he had had a certain amount of mosaic done, and had experienced some of the difficulties which had been alluded to that evening. The flat-surface mosaic, such as that referred to by Mr. Woodward and Mr. Hudson, was to be seen in perfection probably in those great pictures in St. Peter's at Rome. The last time he was there he believed one of the original frescoes was left; but now the whole of the grand pictures had been reproduced in mosaic, and, as they probably knew, in the great workshop in the Vatican itself. He had also examined rather closely some of the mosaics in Ravenna, and the carelessness of the structure when viewed close to was remarkable. As far as he could make out, a large quantity of those pieces which seemed to be mother-of-pearl were certainly dabs of white paint, unless they had been restored during the last few years. In his view a design for mosaic should not be made out with all the detail of separate pieces so as to be slavishly copied. It should be drawn by an artist practically acquainted

with mosaic work and translated by himself or by another artist into mosaic. Thus Turner used to draw for the engraver, whose work he corrected if needful.

Colonel LENOX PRENDERGAST [H.A.] said they had to thank Mr. Bell very much for his Paper, and still more perhaps for having brought out the interesting remarks from several of the speakers who followed him. He confessed to having been especially struck by what fell from Mr. Townsend, who touched upon a point that was most desirable to be thought about by those who would have to carry out mosaic work. It appeared from what Mr. Townsend said that at a particular period a different material was found in which to embed the tesserae. That seemed to have affected the design, and the point he wanted to bring out was this—for one knew perfectly well what would happen if this method of decoration went on—people would become, as they had unfortunately become in certain other things, merely archaeologists. Back they would go to Constantinople and St. Mark's. He saw it as plain as possible—we should never get beyond that. Nobody would for a moment disparage the great workers of Constantinople at St. Sophia and St. Mark's at Venice. They all belonged to the same school. The whole of it came from Constantinople, and, *pace* the reflections of that great man Gibbon on the subject, Constantinople was the headquarters of the art, the literature, and the science of the time. That had been proved within the last twenty years beyond all question. So that it was not on the artistic side as such that he pleaded for a little caution in merely copying their work, which was splendid of its kind. Constantinople sent out the finest of enamel work, the finest carved ivory, the finest material for vestments, the finest things for court purposes that the world had then seen. But they reflected the particular period in which they were produced. Why were we to go back, as he ventured to think we should if we did not take care, and reproduce in the buildings of the present day merely what passed through the minds of the artists of Constantinople centuries ago? If the words of Mr. Bell were to be taken as our textbook, that everything after a certain period was inartistic for this material, we should make no progress at all. He would just venture to say—and he addressed his remarks to Mr. Townsend especially—that in St. Mark's at Venice they would find one chapel, the Chapel of St. Isidore, with, to his mind, very beautiful mosaic—doubtless it would be condemned by Mr. Bell as being insufficiently rugged; but it was in the material, strange to say, which was employed for the work before the discovery of that mentioned by Mr. Townsend. At present, the reason of the revival of mosaic in this country was because it would wash. That was its great recommendation; that in this smoky atmosphere of ours we

could have a decoration that would not be destroyed. Do not, he ventured to plead, tie us down to archaic design simply because we want to get an indestructible material. He was not finding fault with what had been done before; and he did not agree with Mr. Bell's statement that "the mediæval ascetic doctrines of the uncleanness of the flesh and the vanity of the things of this world, and consequently the representation of them, gave way to the more civilised attitude of modern times." It was simply the fashion of the period which dictated design, and why, he asked, should we tie ourselves down to one period?

The PRESIDENT thought that Mr. Bell's statement, that the expression which the limits of the material allowed should be our guide in designing mosaic, was a truism that we could not get away from. It was shown in the different effects of certain mosaics. Take, for instance, those at St. Peter's at Rome, which were copies in tesserae of certain old paintings, if he remembered rightly. If we compared them with the examples of mosaic at Santa Maria Maggiore, or at St. Mark's, or at Pisa, the two things were entirely different. To any man of cultivated taste those at St. Peter's could not compare with the others. Notwithstanding what Colonel Prendergast said, he did not think they could avoid a certain amount of archaism from the material they proposed to use—indeed, the more archaic it was, the better the mosaic to his mind. With regard to gold mosaic, he agreed entirely with Mr. Bell that for external work it was not very satisfactory, whether on a flat or on a curved surface. Mosaics in the atmosphere of this country were apt to look garish, like very bright dresses on ladies on a foggy day. In India, where the sun was very bright, the colours of the mosaics were exceedingly harmonious—they were dull greens and blues and neutral tints and whites; although they were brilliant in general effect, there was nothing garish about them. As to leaving the tesseraing of the design to the workmen, he could not think that that was right. The expression of the design depended greatly on the tesseraing, and he did not think that a man could have his cartoon properly expressed by a workman who puts in the tesserae perhaps from his own idea; he had seen specimens of mosaic done in that way, and the tesserae had been higgledy-piggledy all over the surface. When he was in Burges's office (and in fact since, when he had had mosaic work to carry out on his own account) he used to draw out every single tessera, and show exactly where the joints were to come, and he was inclined to think that was the right way. The old mosaics were generally arranged methodically, in order to get that archaic effect which Colonel Prendergast decried. The colour of the interstices was a very important thing in mosaic. His attention was drawn particularly to this some years ago when

Street was doing the Guards' Chapel. The marble mosaics there were a little higher than level with the eye. First of all they were fixed in some material—he did not know what—and the interstices and joints showed a light colour. He was charmed with them the first time he saw them. They looked like frescoes, having that "sucked-in" appearance. The colour was beautifully soft and delicate, and sufficiently near the eye to be appreciated. Some little time afterwards he found that the figures had all the little joints raked out; they had practically been pointed over with dark cement, and to his mind the effect was entirely spoilt. He was in the Guards' Chapel a few Sundays ago, and he still thought they lacked the charm of colour they had the first time he saw them. There was not the slightest doubt that the greatest difference in effect could be obtained by thickness and colour in the joints of the tesserae. With regard to the size of the tesserae, personally he did not like the large pieces, though that, he supposed, was a matter of taste. There was a marked difference of effect between mosaic in large pieces and that in small tesserae. He did not mean minute tesserae like those in St. Peter's; but large pieces of mosaic always suggested to his mind the difference between *appliqué* work and embroidery. The one was a highly refined, finished piece of work, and the other seemed an easy-going, coarse method of getting over the difficulty.

Mr. ANNING BELL, in responding, referred to some of the points raised by speakers. Colonel Prendergast, he said, rather disputed his idea of the treatment proper to mosaics. Perhaps he had not sufficiently expressed his feeling that it was not archaism. He did not deduce what he thought was the proper treatment from the old work, but from the nature of the material itself. He did not think the work could be done in any other way to make it look well. A great deal of realism could be got, but in doing that the beauty of the material was sacrificed, and only a very poor painting resulted; whereas this glassy, stiff formal material was a beautiful thing in itself, and did not fail at a thing which another material would do better. He did not clearly recall the chapel of St. Isidore, but that fact showed, he thought, that personally he was not very interested in it. He had seen a good deal of work of that kind, and very able work too; but, to tell the truth, he rather thought that it was playing the fool with mosaic to do that sort of thing. Mr. Spence rather disputed his idea that mosaic should dominate to the extent that he thought it should. Mr. Spence thought it went well with a lot of other materials. He (Mr. Bell) did not think so. In an apse in a church it looked well with other things all around, but it must be remembered that in most cases of old work the apse was generally the best thing in the church, but, as a rule, the rest had been knocked to smithereens and restored, so that it was rather hard to say that

one had data to go upon in saying that. He himself felt that it was very much better where there was a great deal of it. Mr. Spence also said that outside mosaics should have variety and mystery. He did not quite see how that was to be got. It would be nice, but they could not get variety outside in a bright light. The light treatment was the right treatment, because one got a whole treatment that looked harmonious with relation to the stone and things round it. As regards the point Mr. Brindley raised, that the old work was done on the flat and then pressed face downwards, he did not think the point of its taking so long to do affected those people particularly; they had a good many centuries to do the work in, and, even when they did it quickly, they employed a great number of men. He had been told that at the church at Monreale it took 133 artists ten years: 133 artists could do a lot in that time even bit by bit. After all, it was not quite so much longer than the face-down method, in which the putty was applied over the top of all the little bits, because they had to match each little bit upon the cartoon. And certainly by this process they did not get the play of facets which another speaker desired. He had not, perhaps, sufficiently enforced his point when he said that the unpleasant effect of the face-down method of laying mosaic was because it was so flat. He meant from the front. They could not help getting a constant variety of plane by the natural touch of the thumb in putting it down when it was worked from the front. He agreed about St. Paul's that the old mosaics were very poor mosaics and nasty-looking things; and Sir William Richmond's, although they were done in an excellent manner, were perhaps a little exaggerated in treatment. He had got a little too glittering and shining an effect; and, if he might dare to say such a thing, he thought the designs of Mr. Watts were not things for mosaics; they were rather florid for that kind of treatment. He was interested in hearing Mr. Townsend's point that the old mosaic was only invented in 1528, which was afterwards commented upon when we were asked why we should stick to the earlier work. He did not think it was a question of having no medium. It was simply that the earlier work could not help being more limited, the materials being so limited that it was difficult to get outside them. When once they got a chance of doing clever things they did them. It was just the same as in all other forms of art. The history of all other arts was, first of all, that a savage man must have a pretty strong impulse to want to do anything at all, except kill other people and get things to eat; he did not know much, and had to fumble about, and slowly he acquired the power to express his ideas. While it was difficult to express his ideas, he wanted to express them to the best extent, but it was so hard that he was pretty careful about the ideas that he

expressed. But when he got easy with his material he wanted to do things that were clever in it, to do things which were difficult of execution, and didn't bother so much about his ideas. And so every art on those lines rose and fell. It was just the same with the old Greeks. They began by being extremely simple and restrained, then rather loose in outline, and then extremely facile, and then like the French comic drawings, with just the same little tricks and dashes. He did not want to take the early mosaics (of which he approved) as being the only examples to follow because they were of that period. He did not wish to say that the later ones must not be followed because they were later, but because they were not such good mosaics. He thought the later ones went wrong because they did not try to do what mosaic naturally does well, and that the earlier workers kept within limits, of which they were probably unconscious, but which are the laws of the material. We should look at the stuff and see what it can do, and then do all we can with it, but we should not try to do more than it can do. He was interested to hear Mr. Crane's remarks about the cartoons being reproduced in work that he had done. He agreed that it could be done, but, all the same, in his opinion it was not a desirable method; and he felt he was rather at issue with the President there, as he (the speaker) was of opinion that the workmen should be given some play along with the artist. Workmen differed so much in their power of carrying things out that one soon found out which of them could do the better work and which the easier work, and one could allot the work accordingly. And then there was a kind of variety got. The differences of tint were dependent to some extent upon other people round the designer. He could not quite think it out on his cartoon, because it was not shining glass; but he could talk over bits, and if he did not like a bit he could have it altered and discuss it with the men. But one ought to get a good class of workmen who had an intelligent interest in the work. Then there was one other point. Mosaic was not against realism; it was beside it; but he thought that it showed the advantage of not being able to get realism, that mosaic was one of the very few arts in which one was forced by the necessity of the material and the limitations of the material to a rather higher plane of thought, or at any rate into somewhat lofty subjects which could not be expressed by clever interesting execution. Elemental facts, the great verities, Time, the Judgment, Life—those things were best treated in something which could not remind one of other clever things in the same material as a painting might. It had just got to be austere and definite—a sort of raw presentation of the idea only, with no drappings or ornament to it. Mosaic did that, and so it was peculiarly useful for religious work.



9, CONDUIT STREET, LONDON, W., 23rd Nov. 1901.

CHRONICLE

The American Institute of Architects.

The Secretary has received the following communication, dated Washington, November 9, from Mr. Glenn Brown, Secretary and Treasurer of the American Institute of Architects:

"The cable dispatch from Mr. William Emerson, the President, and the letter of Mr. W. J. Locke, the Secretary of the Royal Institute of British Architects, were read to the American Institute of Architects in convention assembled at Buffalo within the grounds of the Pan-American Exposition where the shot was fired which caused the death of William McKinley, the beloved President of the United States of America. The members of the American Institute of Architects in convention directed its Secretary to communicate to the Royal Institute of British Architects its high appreciation of the words of sympathy expressed by the officers of the Royal Institute and its recognition of the fraternal relations which exist between the architects of the 'Mother country' and those of the United States."

Reinstatement.

The Council have reinstated as Associate Mr. William Scott [*Soane Medallist 1877*], of Casa Palmerino, Bordighera.

American Office Buildings for London.

Under the heading "The American Invasion of London," *The Times* of the 20th inst. gives publicity to a building project which is being promoted by an influential English-American Syndicate. The proposal is to erect on the north side of the Strand, at the bifurcation of the new street from Holborn, an office building on American lines which is to cost £2,000,000, and "to be the largest and handsomest structure of the kind in the world." The site has a frontage to the Strand of 750 feet, with even longer frontages to the adjoining new streets which are being opened. It has an area of 125,000 square feet. The architect's drawings show that the entire building will be seven stories in height, but a portion will have three more

stories, the whole of steel construction, with sandstone exterior. It will be equipped with every modern convenience. One of its special features will be a spacious rotunda, under a lofty dome, in the centre of the building, intended to form a general rendezvous. The basement will consist of extensive safety deposit vaults, a large restaurant, engines, boilers, and machinery for furnishing heat and electric light, and the power necessary for running thirty lifts. The ground floor will contain special accommodation for banks and insurance companies requiring large rooms, and for shops. The upper floors will be given up to offices. It is estimated that the actual floor space available for letting purposes will amount to 900,000 square feet, and that there will be more than six thousand rooms in the building. The rents payable by the tenants will include charges for heating and electric lighting, cleaning, and telephone service. Every office, or suite of offices, will contain a telephone, and the landlords will contract with the telephone company for a sufficient number of trunk lines to meet all requirements. The lift service will be in operation all night, and the building will be accessible day and night throughout the year. It is estimated that the annual maintenance charges will be upwards of £35,000, and that the construction will probably take two-and-a-half years. The Syndicate has already submitted to the London County Council a written application for a 999 years' lease of the site.

THE NEW MODEL BY-LAWS FOR RURAL DISTRICTS.

By LACY W. RIDGE [E.].

IT has pleased the Local Government Board to issue a model of By-laws for Rural Districts, and so enable the authorities having jurisdiction in such places to relieve themselves from enforcing and their constituents from carrying out the unnecessarily stringent regulations which some of these authorities, under the sanction of the Board, had adopted.

The model itself is preceded in the published copy by an introductory memorandum which recognises that the responsibility for making by-laws rests with Rural District Councils themselves. It intimates that the model is confined to matters affecting health, but must not be regarded as excluding the adoption by Rural Councils of further provisions, which may be applied in portions only of their districts. For these the Rural Councils are referred to the model series prepared for use in urban districts. Some general description of the proposed by-laws follow, and the procedure to be observed in making by-laws is recorded.

The regulations respecting construction are certainly not onerous, and are as follows:

No. 3 requires a cement concrete layer, respecting which it is to be hoped that a great majority of rural councils will have the forethought to omit the words "wherever the dampness of the site or the nature of the soil renders such a precaution necessary."

No. 4 provides for damp courses, and the construction of walls with their external face in contact with the ground; and No. 5 deals with the keeping dry of parapets.

When we come to "space about buildings" (6 to 7), a less liberal spirit prevails, and the imagination of the draughtsman does not seem to have risen beyond the idea of a row of cottages each with fore-court and back garden. The adoption in the country of the very frequent and convenient plan of putting the end of a house towards the road would render the Council powerless to interfere respecting the width of the road. Rural Councils would do wisely to reserve to themselves discretionary powers to deal with irregular sites. If they are unfit to exercise such a discretion local government by elected bodies is a failure.

The frivolous regulations as to windows (8 to 12) follow. They have been sufficiently discussed. Possibly in towns such may be of use. In the open country they are needless, and so mischievous.

Long as they appear to be, it is not probable that architects will object to the by-laws as to drainage and water-closets (13 to 24). Architects owe much to the detailed supervision of drainage works often given in the country by the sanitary authorities. We are left by By-laws 39 to 42 with the impervious cesspool, and the difficulty of the ultimate disposal of the sewage matter remains unsolved.

Earth-closets and privies (25 to 32) are treated as practically the same thing. In fact, the characteristic of the privy, its pit, is abolished. Some difficulty will certainly be found in districts where water is scarce—and that is nearly everywhere in the South of England where people specially desire to live for the sake of the scenery—in carrying out the regulation that every earth closet should be at least 10 feet from a dwelling-house. It may be conceded that they should be cut off by a ventilated lobby, and their walls and floors rendered impervious; but it ought not to be assumed that in well-conducted houses they will be treated as unkempt privies. The point may properly exercise the ingenuity of authorities with rural experience.

It is to be regretted that the Local Government Board have dropped the party wall from their rural model. It is true that for the most part the absence of such a wall may not affect the health of the inmates of houses; but when the supreme moment comes, and the adjoining premises are on fire, it is not only a question of health but of life

that such a protection should exist. Those who are in the habit of noticing the effect of fires must feel that the erection of party walls has done more than all other regulations put together to stop the spread of fire and the destruction of property thereby.

The Board's advice to the Rural Councils to fall back on the Urban Model is not available in this case, as the external and party walls are therein inextricably mixed together, and there are many regulations as to heights and thickness which need not be enacted. This mixing has caused some hardship in small premises by requiring a thickening, desirable in external walls, to be made also in the party walls, where it is not needed.

In my opinion the Institute might, while thanking the authorities of the Local Government Board for the considerable relief likely to be afforded in rural districts, still suggest this subject of party walls for their further consideration.

MINUTES. II.

At the Second General Meeting (Ordinary) of the Session 1901-1902, held Monday, 18th November 1901, at 8 p.m., the President, Mr. William Emerson, in the Chair, with 25 Fellows (including 11 members of the Council), 26 Associates (including 2 members of the Council), 3 Hon. Associates, and visitors, the Minutes of the Meeting held 4th November 1901 [*ante*, p. 19] were taken as read and signed as correct.

The Hon. Secretary announced the decease of Frederick William Porter (elected *Associate* 1850, *Fellow* 1855), and it was resolved that a message expressive of the Institute's sympathy and condolence be forwarded to the family of the deceased member.

The following members attending for the first time since their election were formally admitted and signed the respective registers:—Walter Aston (Manchester), *Fellow*; and James Andrew Minty and Percy Erskine Nobbs (Edinburgh), *Associates*.

A Paper by Mr. Anning Bell, entitled NOTES ON THE PRACTICE OF PICTORIAL MOSAIC, having been read by the author and discussed, a vote of thanks was passed to Mr. Bell by acclamation.

The proceedings then closed, and the Meeting separated at 10.15 p.m.

LEGAL.

Ancient Lights.

WARREN V. BROWN.

This was an appeal from a decision of Mr. Justice Wright, heard in the Court of Appeal, before the Lord Chief Justice and Lords Justices Williams and Romer, on October 28, 29, and November 13.

The action was for damages and an injunction in respect of the obstruction of the access of light to windows more than twenty years old. The plaintiffs had for some years, but much less than twenty, carried on upon the premises a business by means of machinery which required a very exceptional quantity and quality of light. Before that a different industry had been carried on there, which required good, but not special or extraordinary light.

The defendant had by the erection of a building diminished the light which the plaintiffs had enjoyed

from the windows for twenty years past, and the light was now materially insufficient during some part of the day for the special requirements of the plaintiffs' business.

Mr. Justice Wright held that the plaintiffs having an abundance of light for all ordinary purposes of inhabitation or business, they were not entitled to relief on the ground that the extraordinary use of their premises had been interfered with.

The plaintiffs appealed.

Mr. Hugo Young, K.C., and Mr. W. H. Stevenson for the appellants.

Mr. C. M. Warmington, K.C., and Mr. A. Neilson for the defendant.

Their Lordships allowed the appeal, being of opinion that the plaintiffs were entitled to the whole amount of light, and as there had been a substantial interference with their light they were entitled to damages.

REVIEWS.

OLD DUTCH TOWNS AND VILLAGES.

Old Dutch Towns and Villages of the Zuider Zee. By W. J. Tuyn. Illustrations by W. O. J. Nieuwenkamp and J. G. Veldheer. 40. Lond. 1901. [T. Fisher Unwin, London.]

We have an interesting new version of an old story in the thirty plates by two Dutch artists, Messrs. Nieuwenkamp and Veldheer. Most of us know the fascination of the sea-girt lowland, stolen from the sea, the waves ever beating on the dykes and dunes and often making ravages and reprisals. Our sympathies are with the hardy race that has set bounds to the sea and has changed the salt marshes into fertile meadows and useful waterways; driving piles into the sand or mud on which to raise homes, big churches, and the numberless tall windmills that grind the corn, saw the wood, and pump out the superfluity of water.

In a collection of old Dutch masters we find careful and accurate painting of houses, canals, and drawbridges exactly as we see them now; the walls built neatly of tiny bricks, and dotted sparsely with little stones (for stone was very scarce); the quays lined with trees, and the canals full of barges almost on the lines of those now afloat. The streets are still paved with similar small bricks, and we find this paving continued into the country villages. Here are the miniature wooden houses, with brilliant red roofs and gay in bright paint, looking for all the world as if fresh from the toy shop; beside them are the trimmed orchard trees with stems whitewashed or coloured of a sky blue. The ample farmsteads are the counterparts of those that Rembrandt etched.

The work before us treats of the towns, and those especially on the Zuider Zee—that modern gulf which is old enough for mediæval cities to have grown up on its fringe, and already to have lapsed into moss-grown decay and solitude. Some towns, however, are yet thriving marts for

the cargoes of golden or pink cheeses that are floated to them, with other farm produce; they are markets also for the harvest of the fishing fleet. There is interesting matter, the result of careful research, in Mr. Tuyn's description of these towns and their history; while the Introduction by "W. D." is in a very happy vein, full of sympathy with his subject—as pleasant as Mr. G. H. Boughton's "Rambles in Holland," which, though lightly treated, we always feel recalls the charm of the amphibious Dutch people and their watery land.

In the pictures of these (to many of us) familiar scenes the artists have imparted their own individuality: there is quaintness in the composition and in the choice of subject, but with it, almost an intentional disregard of drawing and a uniform heaviness of hand; while the "reproduced" plates show a mechanical method of filling in the tiles of roofs and the bricks of walls. With such architectural subjects we look for correct delineation of a lantern *fliche* or the mouldings of a gateway.

With the woodcuts there is vigour and force, some being powerful studies of light and shade (principally shade), reminding us of the early masters of wood-engraving, or of the straightforward method of the Dutch painters on delft. They suffer by a conventional way of introducing clouds, violent in form, the lines in them as strong as the branches of the trees or the masts of the barges. The paper, the printing, and the binding are as admirable as one would expect even from Mr. Fisher Unwin.

ERNEST GEORGE.

ARCHITECTURAL COMPOSITION.

Principles of Architectural Composition. By John Beverley Robinson. With an introduction by Russell Sturgis. [New York: Architectural Record Co.]

This is a suggestive little book in many ways. There is a freshness in what comes to us across the Atlantic, notwithstanding the difficulty for us of appropriating the method adopted for conveying ideas, even though clothed in the English language.

The "principles" resolve themselves into what may be described as a dogmatic statement on the part of the writers of their own feelings when called in to criticise the taste involved in producing architectural works in the present day. The introduction truly says, "In modern buildings—undertaken in haste, decided on in a scrambling meeting between ignorant committee-men and headlong architects, put through in one-fifth of the time which their design and construction require—in modern buildings the artistic problems connected with grouping, massing, subdivision, relation, and proportion have but little weight. . . . The majority of men need much help in these matters; and such help is best given by the reiteration of those

general principles which govern architectural design." This, then, is the object with which this work has been undertaken, and it is well worth while studying it, whatever conclusion may be come to by the reader as to the tendency of the criticisms.

It is not quite easy to discern the principles on which these judgments have been founded, for, as has been said, "sic volo, sic jubeo," for all we are told, has guided the decisions given. Not that we may not gain much benefit from what has been laid down, for the criticisms are full of careful thought, and such a method of imparting knowledge has before now been used with great success, notably by the late James Fergusson, whose writings and criticisms have had so powerful an influence during the last quarter of a century on matters architectural.

On the whole, it is quite worth while for any student of architecture, whether within the profession or out of it, to weigh carefully the suggestions offered us from America in this book, even if we should come to the same conclusion let drop by the writer, that after all "judgment is required [in design], and that delicacy of apprehension which we call taste, to a great extent obtainable by cultivation, that is, by looking at things with the view of judging whether their appearance is pleasing or not; but, in its extreme degree, inborn, like extreme degrees of other faculties, musical and poetical apprehensions, and even mechanical and arithmetical."

LENEX PRENDERGAST.

SCOTTISH ARCHITECTURAL DETAILS.

Scottish Architectural Details. By John W. Small, F.S.A.Scot. Folio, 1901. *Æneas Mackay, Stirling; Gibbings & Co., Lim., London.*

In Messrs. McGibbon & Ross's works and in "Billings' Antiquities" the architecture of Scotland has been well reviewed from the historic and picturesque sides. But in these works little attention has been paid to the details of ornament or construction.

Indeed, the student who has had the opportunity of comparing the plates in the "Antiquities" with the actual monuments must recognise that, though indeed the draughtsman has put crocket where crocket was, and cable-mold for cable-mold, his crockets and cables are rather emasculated English than Scottish. One rises, too, from the "Antiquities" with a feeling that spiky turrets and stringcourses that will not run straight are the only characteristics of Northern work.

Mr. Small's book will be found of great value in supplementing the existing works on these points of detail. It consists almost entirely of large scale sketches and measured drawings, and the sections of the mouldings are given in every case to a larger scale. One must regret that these

were not even more extensively figured, for the statement "one quarter full size" is not convincing on a reduced drawing.

As we should expect from Mr. Small, the examples have been well chosen and vigorously drawn: they range from dormers and chimney-heads to candlesticks. Many are in themselves very beautiful, and all are typical. Particularly one might refer to the small door from Linlithgow Church and several of the examples of pierced metal work. The door from St. Giles's, Edinburgh, and several of the dormer-heads very strongly show the influence of the French alliance.

The book suffers somewhat from want of arrangement. Woodwork, stonework, and ironwork are mingled on one plate, whilst details from one building are distributed through several. It may, too, appear "scrappy"; but this is unavoidable in a book which aims rather at showing typical details from already published buildings than at presenting any independent survey of the subject.

The references freely given in the explanatory notes to existing works should prove useful.

The paper is good, an index is provided, and the shape most convenient.

RAMSAY TRAQUAIR.

LAND SURVEYING.

Land Surveying. By Samuel Skrimshire, F.S.I. 80. Lond. 1901. Price 7s. 6d. net. [Frank P. Wilson, "Estates Gazette" Office, 1901.]

If Mr. Skrimshire's treatise is an exposition of the whole theory and practice of land surveying, this sphere of activity seems to be far less complicated than we had imagined. Apparently, all you have to do is to learn the use of certain simple instruments, and a book of logarithms, walk about with a chain and a "leader" and a "follower," and jot down measurements in a notebook according to rule of thumb. Any intelligent person with a knowledge of elementary mathematics and a sound constitution could be a skilled land surveyor in a week. We suspect, however, that in practice there are dark and devious complexities arising in special cases which no textbook can take into account, and with which only the experience of years can successfully grapple. The treatise under notice can therefore be regarded as only elementary. It takes the beginner eager to survey by the hand, and tells him how to use a T square and a theodolite, how to solve triangles, and how to knock out the kinks in his chain and how to fold it up neatly; then how to make a key-plan, how to proceed to "triangulation" and other mysteries, and, lastly, how to make the simpler surveys. For the student it seems to be an admirable handbook, well arranged, and written from beginning to end in a style of surprising lucidity.

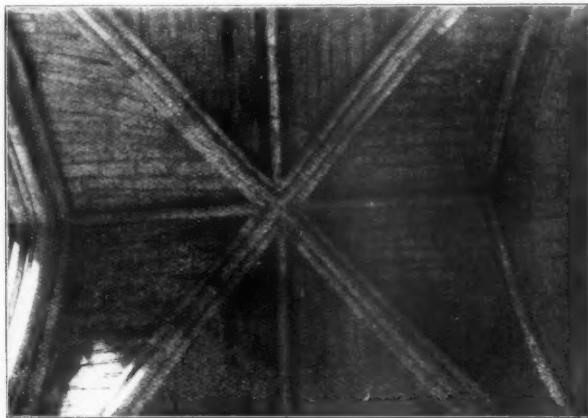
RIPON.

Bell's Cathedral Series—The Cathedral Church of Ripon: A Short History of the Church and a Description of its Fabric. By Cecil Hallett, B.A., Magdalen College, Oxford. With 53 Illustrations. Price 1s. 6d. 80. Lond. 1901. [Messrs. George Bell & Sons, York Street, Covent Garden, W.C.]

Mr. Hallett's contribution to Messrs. Bell's Cathedral Series is of great merit. Not content with exploring all information that was in print, and with cross-questioning deans, archdeacons, and vergers, he has examined the structure himself with a minuteness and thoroughness that renders his work one of permanent value. But the better is always the enemy of the good; and in this case the book would have been bettered considerably if it had been submitted to the re-

on York Minster, it appears to me quite the best in the series. The illustrations are unusually numerous and good, with the exception of one of the north side of the interior of the choir, which is an extreme specimen of what the experts, I believe, call technically a "drunken" photograph; all the lines converging upwards.

As originally built, Ripon Minster was one of the most remarkable churches in Great Britain. Like Bolton, its nave was without aisles, but Ripon nave was 40 feet broad; the broadest in England till York nave was built a century later. With this great nave were united an aisled transept and an aisled choir; a combination not unusual in the South of France and the North of Spain, as in the cathedrals of Toulouse, Bordeaux, and Gerona, and as effective as it is unusual, but



Watson, Ripon, Photo.

VAULT OF NORTH TRANSEPT AISLE, TWELFTH CENTURY.

vision of a professional architect, so that the statements in it might be corrected, or, at any rate, expressed in definite architectural phraseology. It is really not easy to see what the author means when he says (p. 88) that under the soffit of an arch is a roll "between two mouldings that are hook-shaped in section." And it appears to be contrary to the usual connotation of the term to say that the simple pointed bowtell has a "keel-moulding," as Mr. Hallett does on p. 91, and whenever a pointed bowtell occurs. The distinction seems to be that the latter has a convex, the former a concave surface. And, as a rule, the keel-moulding is the later in date; though it occurs in the transitional piers of the central tower of Boxgrove. But, in the main, the author has done his work with very great care; and the book is no mere compilation, but shows everywhere signs of original work. With the exception of Mr. Clutton-Brock's excellent volume

quite unknown in these islands. In the eastern chapels of the transept, walled off from the choir-aisle, and raised above the transept, the builders followed the Cistercian traditions of the district. Otherwise, among English church-plans, this of twelfth-century Ripon was a sort of architectural Melchizedek.

Mr. Hallett, perhaps wisely, does not speculate as to how Ripon Minster came into being in the twelfth century. It is an amazing contrast to St. Frideswide, Oxford, which is utterly Romanesque at heart; yet both were building together, and both for Augustinian Canons. It is quite disconnected from the advanced Gothic of the West of England; it is far more Gothic than New Shoreham or St. Cross, and it was probably well under way before William of Sens commenced his work at Canterbury. So it cannot be affiliated to the work either of South or West. And it seems to have just as little kinship with

the heavy Cistercian work of Fountains, Kirkstall, and Furness; which, in spite of pointed arches, is still but Romanesque. It is earlier than Byland, if the monks did not build their church till after they moved thither from Stocking; and its long choir is a great advance on that of Byland. The original intention seems to have been to vault both choir and transepts; the vaults being designed to spring at the level of the clerestory-sill. Up to that point there is in the choir a group of five vaulting-shafts; as at Castle Acre and in the west bays of the nave of Worcester; which would seem to imply that the vault was to have wall-ribs; as, indeed, is the case with the vault of the aisle of the north transept, illustrated by Mr. Hallett. It is somewhat remarkable that in the twelfth-century Gothic vaults, both of Worcester and Ripon, wall-ribs are employed; considering that they are rare in Norman work and in later English Gothic. In the aisle-vault a still more remarkable feature appears, viz. ridge-ribs, which are so slender that, as in Angevin vaulting, their function can be little more than decorative. The "filling in" of this transept-vault is French in construction. French also is the perching of the five vaulting-shafts of each bay of the choir on the abacus. The broadness of the windows, as in Canterbury choir, is more characteristic of French than

English work. And the triforium, especially that of the north wall of the transept, is reminiscent of the upper aisle of Noyon, which is probably c. 1152. The proportions, too, of the internal elevation of the choir, especially the importance given to the clerestory rather than to the triforium, follow the French standard. So also, perhaps, the total absence of Romanesque ornament—so different either from Canterbury or from Glastonbury—may be due to the influence of the early Gothic of Northern France, though doubtless we must take into account also the unadorned Cistercian work of the neighbouring northern abbeys. In other respects the work is English in character. But whether French or English, the influence of the twelfth-century work in Ripon was, I think, very great on North of England Gothic. Fountains choir and transept, indeed, York and Durham transepts, and Beverley, owe much to the Gothic of the South-East and of Lincoln. But if the internal elevations of the choirs of Benedictine Whitby and Cistercian Rievaulx, both probably commenced c. 1200, be examined, it will be seen that they owe much to the work of the Augustinian Canons at Ripon, and possibly also to that of the Secular Canons of York, both under the influence of a French archbishop, Roger, of Pont l'Évêque, in Normandy.

FRANCIS BOND.



Donald P. Jones, Photo.

RIPON CATHEDRAL FROM THE FOOTBRIDGE OVER THE SKELL.

THE PAST, PRESENT, AND FUTURE OF BRITISH ARCHITECTURE.

By FRANK CAWS [F.],

PRESIDENT OF THE NORTHERN ARCHITECTURAL ASSOCIATION.

Presidential Address delivered to the Northern Architectural Association, Newcastle-on-Tyne, at the Opening Meeting of the Winter Session, 13th November 1901.

FELLOW ARCHITECTS,—The honour which you have conferred on me in calling me to this Chair entails the duty of giving the opening address, not only of this session but of this century; and it therefore seems fitting to allude at the outset to—

THE FUTURE IN RELATION TO THE PAST AND PRESENT.

While our country has just entered on a new *régime*, that of King Edward VII., which cannot possibly in the nature of things be so prolonged as that of his glorious mother, our profession also has entered on another era of activity, and, let us hope, of real progress towards that higher excellence for which the noblest minded never cease to strive. The nineteenth century will be distinguished by the future architectural historian as the most fickle century of all, in regard to the number, variety, and incompatibility of the styles and fashions of buildings which it has so restlessly and inconstantly first embraced and then spurned. During this fickle century, the Battle of Styles has been fought to a finish, not of the "final issue," which never can be finished, but to a finish of the two contestants, the old Classic and the resurrected Gothic, which entered both on the fray and neither of which has survived. "As dead as Queen Anne" is an expression which has passed into a common byword. Yet it is remarkable that if there is any distinguishable survivor of the architectural fights of the great Victorian age, it is the Queen Anne type, which still possesses much vitality, and seems to enjoy a fair prospect of extending its influence far into the twentieth century.

There is little use in arguing for or against a style. Taste is one thing, and logic is another. It is as idle to investigate the reasons why architects and their clients prefer certain styles of buildings, as why ladies choose certain fashions of bonnets. Such preferences, which are determined by fancy, or perhaps by love—though seldom, if ever, by logic—have possibly some little rhyme but less of reason in them. Architects choose their styles of architecture as they choose their sweethearts and wives. No architect worth his salt will allow another to dictate that choice which his own heart must alone make, and in which to himself he must be true.

But though it is best for every architect to work in the style which is most congenial to him, and in which he is most at home, yet, consciously or not, we are all deeply influenced by one another; for wherever men associate closely their tastes

and ideas become so assimilated that a strong family likeness pervades their works. Thus those associations of men which we distinguish as nations, viz., the Egyptian, Assyrian, Greek, Roman, Hindoo, Moorish, Gothic, Chinese, Russian, and others, have developed distinctive types of architecture, each possessing strong individuality, as though the product of one mind.

The mind of the modern architect is as the basin of the sea, into which all the rivers of the past ages of architectural styles run; and it will not be strange, but quite natural, if this commingled ocean of ideas should present ultimately a cosmopolitan expansiveness of majestic thought, as the outcome of all its agitation.

The intercommunication of nation with nation has, during the nineteenth century, by international exhibitions and in a thousand other ways, been developed to an extent undreamt of in old-world days, and has very powerfully tended to an exchange, assimilation and commingling of racial ideas and fashions, not only in architectural design, but also in manners, dress, and literature; so that while we find, for instance, the people of Japan dressing and behaving like Europeans, we also find Aubrey Beardsley and other London artists of his singular school drawing and painting after the Japanese manner. We are all more or less impressed by the marvellous art power of Japan. Brought by press, steam-locomotion, telegraphy, and the numerous other instruments of modern science (and especially by photography) face to face with the works and ways of architects of other climes and times, it is not surprising that British architects during the Victorian age have found it impossible to preserve their insularity of thought and feeling.

The twentieth century must advance to perhaps one-half its length ere the ordinary observer of British architecture will become impressed by some one resultant style, as the eventual outcome of that multitudinous clashing of foreign ideas which crowded so thickly on one another throughout the nineteenth century as to create the present chaos, out of which the twentieth century order of architecture can be evolved only by slow degrees. Nor can we wonder if, to escape from the bewildering distractions of so many charming styles wooing his favour, many a British architect is found reverting fondly to the sweetly familiar homeliness and refined quaintness of the Queen Anne type, just as a reader might turn for relief from the writings of Dante, and other sublime bards, to the simpler and more soothing poems of Longfellow.

The question is sometimes asked, "Will the Gothic again revive?" Men of the twentieth century cannot bring themselves to feel continuously as born mediaevalists. If we must go back, to most of us a romance of the time of Elizabeth, or Charles I. and Cromwell, is more attractive than an equally well-written one of the time of the Plantagenets. There is no denying that our British literature and art, as well as architecture, are, in their sentiment, quite decidedly post-mediaeval. Chaucer, standing on the border line of the Middle Ages, is seldom read to-day; and even Spenser, further though he is from that border line, finds few readers. Yet Shakespeare, who wrote near the same border line, is more widely read than ever. It is noteworthy that he was so passionately modern in sentiment that though he wrote of "cloud-capp'd towers and gorgeous palaces," he seldom or never alluded in his works to the majestic fanes of the mediaeval builders, which in his time were recently completed, and were, as Tennyson would say, "white from the mason's hand." I have often thought this a negative indication of the state of mind of Shakespeare's English public, who had, even in his day seemingly, already grown weary of mediaeval sentiment. This tiredness became more pronounced as time rolled on, till in the days of the great Sir Christopher, by common consent, the contemptuous term "Gothic" was applied indiscriminately to all mediaeval art and architecture.

The Pusey-Pugin reaction of thought and taste occurred at length when some of the oldest among us were boys, who came more or less under the spell of that great but short-lived movement which, in the small span of our little lives, has already proved to have been a mere flash in the pan.

Those of us who learned in our youth to love mediaeval architecture, and mediaeval sentiment generally, can never bring ourselves not to love it; for "*the thoughts of youth are long, long thoughts.*" But we must mournfully admit it is an overblown rose, whose lovely odours linger still about cathedral cloisters and old-world haunts, but whose roots find no proper food in the soil of twentieth century ideals.

During the great modern struggle of types, the spirit of Art has been torn and distracted this way and that between rival sentiments, widely differing, yet each having charms of its own hard to resist.

We have felt and known the strife which has claimed on both sides its champions and devotees, and has called architects to group themselves in camps; and we know that this strife has left the spirit of Art to wander restlessly in "dry places," seeking a home in some new form, and thus far finding none other than those Dutch renaissance lumberings whereby the fair ground of England is being day by day increasingly cumbered.

So pronounced are we Britishers in our cosmopolitan proclivities, that, much to the astonish-

ment of continental nations, we accept with equal equanimity the triumphs of Dutch art and the successes of Dutch arms. This equanimity, which some regard as proof of our weakness, may rather be due to our innate consciousness of power and capacity in both Art and Arms, a power and capacity which, let us hope, in the twentieth century may eclipse our great past by our greater and still more heroic future.

Regarding the future of British architecture we need not ask, "What will the end be?" For there will be and can be no end to the mutable fashions affected by restless humanity. When an architect has lived through forty years of such wilderness wanderings from change to confusion of change, the keen edge of his fondness for any mere fashion wears off, and he feels inclined to ask, "What does it matter whether Gothic or Classic triumphs, or whether French Renaissance, or Flemish, rules the English architectural roost?" Experience and satiety render him increasingly indifferent to mere freaks and whimsies of fluctuating fashions, while he becomes ever more and more keenly appreciative of fundamental principles, which he rejoices to discover and follow whenever and wherever he can. We all become, with advancing knowledge, more and more alive to the fact that while fashions change principles are unchanging, while fashions pass principles remain: so that in cultivating deeper acquaintance with principles we are, more or less consciously, making friends of the Eternal; and if from sheer weariness of change we fail to keep pace with fashions that bloom in a day to die in a night, we may ever keep in close touch with those great verities wherein Beauty and Truth are vitally rooted.

Signs are not wanting that the rising generation of architects, to whom the twentieth century belongs, are coming to regard an intimate acquaintance with structural principles as a *sine qua non* of professional proficiency; for not merely Statics, but also Dynamics, are now included in the curriculum of the Preliminary Examination which even novitiates must pass ere they can take rank merely as Students of the Royal Institute of British Architects.

This remark naturally introduces the one subject which at the beginning of this New Age holds the field more than any other—and is likely long to hold the field—viz.:

EDUCATION.

Not, as heretofore, education for education's sake, but as a means to an end—i.e. education as qualifying for practical work. The education which in the centuries past was given to polish a man into a "gentleman" has, in this twentieth century, entered on a new career, with the nobler aim of teaching gentlemen to become workmen.

In this new order of education, architects of all men can least afford to be left behind; and especially the architects of the North-East of

England, where so honourably heavy a share of the work of our nation is done. The very word "architect" expresses the proper relation of our profession to the technical education movement, which bids fair to become *the greatest reform movement of our time*.

It would be difficult to point to any situation in which an intelligent youth would be so favourably placed for acquiring a sound technical education as in a good architect's office. But, alas! we all know, from observation and experience, that an intimate knowledge of structural science, even when combined with artistic qualifications of the highest order, are not by themselves enough to secure success in our profession, to attain which, in these days of push and enterprise, commercial talent and capacity are also much needed.

There was education in the Middle Ages, too, viz. that of the monasteries; and, as a result, the monks gave us mediæval architecture, which forms at once their monument and tomb. They had their day, and ceased to be. Their day is not ours. In these days we may and must be students, as the monks were, but not after their fashion. We must not permit our studies to withdraw us from social and business life. We cannot, as architects, lead lives of cloistered seclusion, but must be, in the best of senses, men of the world.

The truly successful modern architect must of necessity be an artist, scientist, and commercialist, and what is not quite expressed by the above literal English translation—*un homme du monde* as well. Indeed, every architect's ultimate character is determined by the degrees and proportions in which all and each of these distinct components of his mind and training combine and preponderate; for as all Nature's colours are resolvable into their three primaries—red, yellow, and blue—so all the varieties of mind, character, and work to be found in the architect result from the manner in which Art (which is sentiment), Science (which is truth), and Commerce (which is fellowship) are mixed in his make.

Thus we have architects who are mere sentimentalists making pretty drawings which they have neither the wit nor the will to carry out without getting able constructors to undertake the design of the practical details for them.

Then, again, we have architects, generally styled "Engineers," who are scientists destitute of the sense of the beautiful, whose structures are much too often painfully clever exhibitions of frightful unmitigated ugliness.

And last—and, in their own and the world's eyes, best—are the commercial architects, who, comparatively indifferent to and not seldom grossly ignorant of both art and science, scour the country side for commissions, meanwhile employing artists to design their façades and interiors, and engineers or able constructors to solve their structural problems, while they themselves absorb the great bulk of both *kudos* and cash.

To those of us who are old and grey it is now too late to cherish new ideals for ourselves. We have shaped our course on certain lines, and cannot at this late period of our lives alter what we have fixed. But to those among us to whom emphatically the twentieth century belongs, it is neither too late nor too soon to set before ourselves these three component qualities, *Art, Science, Commerce*, and make up our minds which of the three we will worship most and follow hardest; or whether we will strive for that highest ideal and most honourable, because most difficult of attainment, in which a deep love of art, familiar knowledge of science, and strict attention to business are combined in the fully developed, every way qualified, up-to-date architect.

The youngest among us, in view of these four alternatives, should act on Goethe's advice,

"Choose well! your choice is brief, and yet endless."

In case one should say of this fourth ideal, "Impossible!" the name of Michelangelo may be mentioned. Artist (sculptor and painter), engineer (of fortifications), business man (manager for many years of marble quarries), poet (of glorious sonnets), and, in one all-comprising word, Architect, i.e. master of arts, master of works, master of affairs. Not a mediævalist was he, but a modern; as modern as Shakespeare, and as permanently great. If such men are impossible to the twentieth century, so much the worse for the century.

There are unfortunately too many signs, even in our own noble profession, that the spirit of this age is not moving Michelangelo-wards. The popular measure of success is not supreme technical skill, is not even genius itself—that gift from the Highest to the highest—but is *gold*.

This debasing influence reveals its presence amongst us by an increasing disposition to bribe clients to employ us, by offering our services at rates of remuneration below the rates fixed by usage, and by which every member of the Northern Architectural Association, and of the Royal Institute of British Architects, to which it is affiliated, is bound in honour and fairness to his professional brethren to firmly adhere. Such unworthy tactics are practised in the dark; and only occasionally, when some accidental circumstance lets in the daylight on their utter meanness, is the presence detected of a species of fungus threatening to choke with its clammy poison those springs of our professional life which in their unimpaired clearness are our commonly acknowledged heritage.

The same architectural Jacobs who, by secretly undercutting their *confrères*, do not confine their commercial talent to that narrow sphere of operation, but extend it to the acceptance of those secret commissions which the late Lord Chief Justice determined to make an end of, commissions obtained by what amounts to a conspiracy of tradesman and architect to rob the client without

his ever knowing or suspecting. The client, perhaps, flatters himself that he has done a smart thing in employing an architect who is not above working for three per cent., little dreaming that by secret commissions and otherwise he is really paying seven, or perhaps ten, per cent.

To what extent these nefarious practices obtain amongst architects it is not easy for the clean-handed to discover, even if wishful to probe foul waters. But it is certain that amongst building contractors of good standing and honourable character, the acceptance by some architects of secret commissions engenders suspicion and lack of respect, which tend to lower the moral status of our profession, and do it harm to an extent unknown and quite incalculable. The occasional offers of secret commissions to architects who decline them reveal the unpleasant fact that all architects do not decline them.

Commercialism has its right place when it leads us to do our work thoroughly and promptly, in an orderly business-like way, zealously serving the legitimate interests of our client while maintaining proper regard for those of contractor and architect. Commercialism has its wrong place when it leads us to undercut our brother architects, or to hide our own shortcomings and mistakes at the expense of a too complaisant contractor, or to accept commissions from tradesmen; for though the latter kind of commercialism may enrich the man whose conscience allows it, at the same time it robs the noble and clean-handed profession of architecture of its good name, and tends to make it poor indeed.

One of the best results of the formation and maintenance of the Royal Institute of British Architects and its kindred provincial associations is the promotion of those individual friendships between fellow-architects which are the best practical guarantee for uniformity and clean-handedness of practice, both as to the dealings of architects with one another, and with clients, contractors, and all others concerned.

Another way in which the power of association has proved peculiarly helpful to the rising generation of North-country architects is in the acquisition of our grand Library, that veritable Golconda of architectural wealth which alone amply justifies the establishment of the Northern Architectural Association. This is a treasure such as even the most lavishly equipped of technical colleges cannot boast; and which, as time rolls on, will become increasingly a source of inspiration and strength, not to ourselves only, but to those who come after us. It is also a monument due to the unostentatious, scholarly, persistent labours and unflagging interest of our highly esteemed Honorary Librarian, who has been its creator. Surely we should at an early date fix on the entablature of the chief bookcase a small silver plate permanently recording our sense of deep indebtedness to our good friend Mr. Charlewood,

for devoting so many years of his busy life to the creation and care of this splendid Library.

But while thus collectively, as a society, marking our appreciation of services so invaluable rendered to us so freely, we can individually, by diligently studying the books, instead of letting them lie unused on their shelves, best contribute to the attainment of the prime object of Mr. Charlewood's efforts, by so improving our knowledge, skill, and taste, as to shed, by our after works, a light and lustre upon North-country architecture such as we have not before displayed.

These are days in which originality is much (perhaps too much) sought after in architecture, as in art generally, and also in literature. But originality, as Sir Joshua Reynolds was never tired of reminding Royal Academystudents, is the outcome, not of ignorance, but of knowledge of what others have done. Certainly, the architect who neglects the library is (other things being equal) the least likely to develop originality worthy of the name; for, paradoxical though it may seem, originality is undoubtedly brought to birth by education breaking the fallow ground of the intellect. Too many modern attempts at originality in architecture issue in mere oddities and vulgar sensationalism.

Cruel contortions of gable copings and pediments, coupled with rustication carried to absurd excesses, are having a run just now. But the public taste, though strong enough to enjoy almost any architectural novelty, however vulgar, will become soon nauseated of such wretched fare.

Nature's method of originality is worthy of our highest emulation. She knows how to be unfailingly interesting, and perpetually original, *within the limitations of type*. For example, in her reproductions of the human face divine she never makes two alike. Every human face possesses individuality, *i.e.* originality. Yet the number and arrangement of the features are the same in all cases, the greatest differences of individuality being due to the smallest and most subtle variations.

Nature's originalities are produced not by such horrible expedients as putting eyes in foreheads, or by other monstrous transpositions of features, but by the most exquisite touches of ineffable art. The Greek architects followed Nature in this method of originality; and though to Goth and Vandal the Greek temples all seem so much alike as to be well nigh indistinguishable from one another, to the more refined perception of the Greek, as keen to distinguish minutest changes of form and proportion as the ear of the musician to detect infinitesimal gradations of tune, time and emphasis, no two temples were alike.

We need to exercise in architectural taste that same exquisite sense of which the soul alone is conscious, and which words of the finest are too coarse to express, that sense whereby we judge of the beauty of women and the grandeur of men.

The best architecture is that which makes us feel most and say least.

